

WORLD PRESS FREEDOM RANKED FROM BEST TO WORST

Reporters Without Borders recently published its second world press freedom ranking for the year ended 1 September 2003.

Like last year, the most catastrophic situation is to found in Asia, with eight countries in the bottom 10: North Korea, Burma, Laos, China, Iran, Vietnam, Turkmenistan and Bhutan. Independent news media are either nonexistent in these countries or are constantly repressed by the authorities. Journalists there work in extremely difficult conditions, with no freedom or security. A number of them are imprisoned in Burma, China and Iran.

Cuba is in 165th position, second from last. Twenty-six independent journalists were arrested there in the spring of 2003 and sentenced to prison terms ranging from 14 to 27 years, making Cuba the world's biggest prison for journalists. Eritrea, in 162nd position, has the worst situation in Africa. Privately owned news media have been banned there for the past two years and 14 journalists are being held in undisclosed locations.

The ranking distinguishes behaviour at home and abroad in the cases of the United States and Israel. They are ranked in 31st and 44th positions respectively as regards respect for freedom of expression on their



own territory, but they fall to the 135th and 146th positions as regards behaviour beyond their borders. The Israeli Army's repeated abuses against journalists in the occupied territories and the US Army's responsibility in the death of several reporters during the war in Iraq constitute unacceptable behaviour by two nations that never stop stressing their commitment to freedom of expression.

The war in Iraq played a major role in an increased crackdown on the press by the Arab regimes. Concerned about maintaining their image and facing public opinion largely opposed to the war, they stepped up control of the press and increased pres-

sure on journalists, who are forced to use self-censorship.

The situation remains worrying in Russia (148th), Ukraine (132nd) and Belarus (151st). A truly independent press exists in Russia, but Russia's poor ranking is justified by the censorship of anything to do with the war in Chechnya, several murders and the recent abduction of the Agence France-Presse correspondent in Ingushetia.

Press freedom is virtually nonexistent in much of central Asia, especially Turkmenistan (158th) and Uzbekistan (154th). No criticism of the authorities is tolerated.

To compile this ranking, Reporters Without Borders asked journalists, researchers, jurists and human rights activists to fill

out a questionnaire evaluating respect for press freedom in a particular country. In all, 166 countries are included in the ranking.

As a matter of interest, the press freedom ranking of countries (other than the US) where NEXUS has an English-language edition has Canada in 10th place, New Zealand in 17th, the UK in 27th and Australia in 50th place.

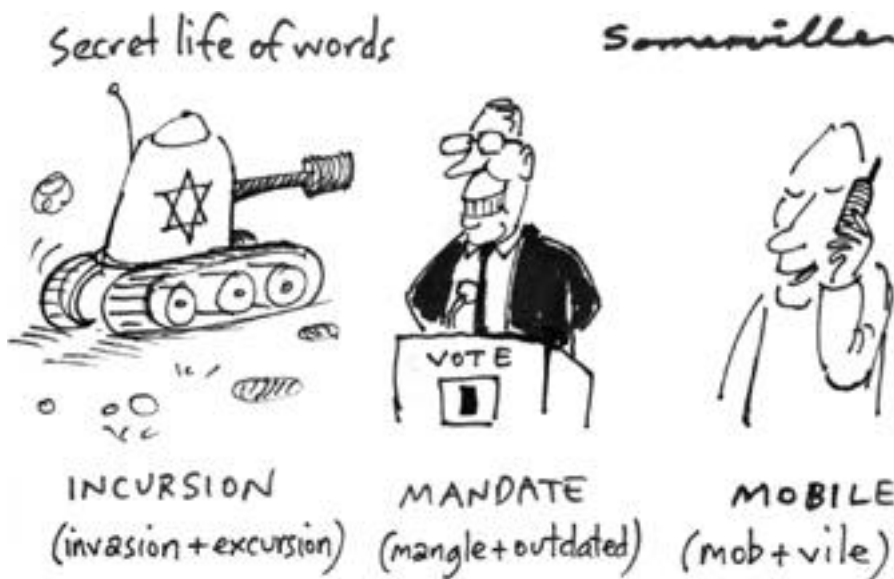
(Source: Reporters Without Borders; for the full report, go to http://www.rsf.fr/article.php3?id_article=8247)

SOLAR ACTIVITY GREATER THAN A MILLENNIUM AGO

The Sun is more active now than it has been for over a millennium. The realisation, which comes from a reconstruction of sunspots stretching back 1,150 years, comes just as the Sun has thrown a tantrum. Over the last week [late October/early November], giant plumes of material burst out from our star's surface and streamed into space, causing geomagnetic storms on Earth.

The dark patches on the surface of the Sun that we call sunspots are a symptom of fierce magnetic activity inside. Ilya Usoskin, a geophysicist working with colleagues from the University of Oulu in Finland and the Max Planck Institute for Aeronomy in Katlenburg-Lindau, Germany, found that there have been more sunspots since the 1940s than for the past 1,150 years.

Sunspot observations stretch back to the



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early 17th century, when the telescope was invented. To extend the data farther back in time, Usoskin's team used a physical model to calculate past sunspot numbers from levels of beryllium-10, a radioactive isotope preserved in ice cores taken from Greenland and Antarctica.

The findings may stoke the controversy over the contribution of the Sun to global warming. Usoskin and his team are reluctant to be dragged into the debate, but their work will probably be seized upon by those who claim that temperature rises over the past century are the result of changes in the Sun's output (*New Scientist*, 12 April 2003). However, the link between the Sun's magnetic activity and the Earth's climate is unclear.

(Source: *New Scientist*, 2 November 2003, <http://www.newscientist.com>)

MORE SECRECY ORDERS IMPOSED ON PATENT APPLICATIONS

Over the past year in the USA, 133 secrecy orders were imposed on new patent applications, limiting or preventing their disclosure on grounds that they could be "detrimental to US national security". More than half of the new orders affected private inventors who developed their inventions without government funding or support.

The legal authority for patent secrecy orders derives from the Invention Secrecy Act of 1951, which provides for government review of patent applications related to a wide range of military technologies and authorises the government to regulate or prevent their disclosure.

At the end of fiscal year 2003, a total of 4,838 secrecy orders were still in effect, according to statistics released by the Patent and Trademark Office under the Freedom of Information Act.

The Invention Secrecy Act and the Atomic Energy Act are the only statutes that assert a government right to prevent the publication of privately generated information, a provision that appears to be at odds with the First Amendment to the US Constitution.

Secrecy orders imposed on such private inventors are termed "John Doe" orders. Last year, an unusually large 75 of the 133 new secrecy orders were John Doe orders. The nature of these secret inventions could not, of course, be ascertained.

(Source: *Secrecy News*, vol. 2003, no. 87, 9 October 2003, <http://www.fas.org>)

EU POLL LABELS ISRAEL AS WORLD'S BIGGEST THREAT

The European Union is scrambling to contain the fallout from a public opinion poll that—to Israel's fury—labelled the Jewish state as the biggest threat to world peace.

The United States was just behind Israel in the global danger league, in joint second place with North Korea and Iran, according to the "Eurobarometer" poll requested by the European Commission.

The results were part of an October survey of Europeans' attitudes in the aftermath of the Iraq war, which also found that more than two-thirds of EU citizens think the US-led war was wrong.

The Israeli Embassy in Brussels voiced outrage at the findings, which said that 59% of Europeans see Israel as a threat to world peace.

A total of 53% said Iran, North Korea and the United States pose a threat, followed by 52% for Iraq, 50% for Afghanistan and 48% for Pakistan.

Countries lower down the list included Syria, Libya, Saudi Arabia, China, India, Russia and Somalia. The EU itself was described as a threat by 8% of respondents. (Source: *AFP*, 4 November 2003)

FOX NEWS PROMOTES MISPERCEPTIONS ON IRAQ WAR

It seems Rupert Murdoch has been brainwashing the masses again, with new US research showing that Americans watching his Fox News were much more likely than others to have "significant misperceptions" about the Iraq War.

The research shows a majority of Americans had significant misperceptions about the Iraq War, but the study noted that "those who primarily watch Fox News are significantly more likely to have misperceptions, while those who primarily listen to NPR or watch PBS are significantly less likely".

Polls of 3,334 people conducted between June and September found 60% of Americans had one of three main misperceptions: 48% believed there was evidence linking Saddam Hussein to al-Qa'ida; 22% believed the US had found weapons of mass destruction in Iraq; and 25% reckoned that world public opinion supported the US invasion of Iraq.

It is interesting that of those watching Fox News, 80% got it wrong on one of these issues. Only 23% of Public Broadcasting Service (PBS) viewers had misperceptions, while 55% of CNN watchers had some misperceptions.

(Source: *Global Policy Forum*, 2 October 2003, <http://www.globalpolicy.org/security/issues/iraq/media/2003/>)

NETWORKS REQUIRED TO TRACK CELLPHONE LOCATIONS

Cellphone networks across Europe and the United States will soon be able to find you, wherever you are.

In September, a European Union directive called E112 came into force that requires mobile phone networks to provide emergency services with whatever location information they have about where a mobile phone call was made.

While Europe is leading the way on



"Of course I think sunsets are moving...
I just think they were more moving before AOL copyrighted them."

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cellphone positioning, other countries are not far behind. In the US, a similar law will force network operators to track a phone's location to within 50 metres by 2005 and to make this data available to emergency services.

Network operators have been quick to spot the business opportunities this offers. If they can locate a caller for the emergency services, why not for other purposes too? Now the first businesses to exploit this information are beginning to appear and they provide a glimpse of the kinds of services we can expect in future.

In the UK, the network operator Vodafone enables its customers to use their phones to find the nearest ATM, cinema or a plumber. Another service allows businesses to track their employees—which is particularly useful in the courier industry, for example. And a London-based start-up called Zingo has begun exploiting the service to put callers in touch with the nearest available taxi. Parents can even sign up to see where their children are, or at least where they left their mobile phones.

This is just the beginning. Expect to see services become more accurate and widespread as the technology develops.

(Source: New Scientist, 18 October 2003)

WARMER OCEANS MAY TRIGGER CLIMATE CHANGE

Warmer oceans may be responsible for triggering the droughts that have engulfed the Sahel region of Africa for much of the past 30 years.

A new comparison of rainfall data with sea-surface temperatures in the tropics undermines two alternative theories, which blame the drought on deforestation or the influence of sulphurous clouds wafting to the African continent from Europe.

The Sahel droughts have been among the worst the world has ever seen, and caused the infamous famines that crippled countries such as Ethiopia in the 1980s. Now Alessandra Giannini of the International Institute for Climate Prediction in Palisades, New York, has compared 70 years of rainfall data for the drought-prone Sahel with sea-surface temperatures in the tropics. She found a strong correlation between the two, especially between rainfall and temperatures in the Indian Ocean. As the ocean got warmer, rainfall decreased all along the heavily populated Sahel, south of the Sahara. The research was published online by the journal *Science* (<http://www.sciencexpress.org>).

When Giannini ran a climate model in which the only variable was sea-surface temperatures, it accurately reproduced the arid 1940s, the wet 1950s and 1960s, the dry 1970s and 1980s, and the partial recovery in the 1990s. Giannini says the oceans have an effect because warm waters upset the atmospheric circulation, weakening the monsoon and triggering drought from Senegal to Ethiopia.

(Source: New Scientist, 18 October 2003)

MICROWAVE COOKING ZAPS NUTRIENTS IN FOOD

Steaming is by far the best way to cook vegetables and microwaving them is the worst, according to a study that compared the nutrients left in broccoli cooked in different ways.

Cristina García-Viguera's team at CEBAS-CSIC, one of Spain's scientific research council centres, in Murcia, measured the levels of antioxidants such as flavonoids left in broccoli after steaming, pressure cooking, boiling or microwaving.

Steaming left antioxidants almost

untouched, while microwaving virtually eliminated them, the team found (*Journal of the Science of Food and Agriculture*, vol. 83, p. 1511).

Microwaves destroy more antioxidants probably because they generate higher temperatures, said García-Viguera. "Internal heating is much more damaging."

Pressure cooking and boiling have intermediate effects. Neither destroys as great a proportion of the antioxidants as microwaving. But many of the remaining antioxidants leach out into the water during cooking, leaving only 20 to 45 per cent of the levels found in raw broccoli.

In a separate study in the same journal (p. 1389), Riitta Puupponen-Pimiä at VTT Biotechnology in Espoo, Finland, found that blanching vegetables before freezing also decreases their nutrient content. Freezing also causes small losses.

(Source: New Scientist, 25 October 2003)

UK GM CROPS TRIAL CONFIRMS FEARS FOR BIODIVERSITY

Results of the world's largest trial on the effects of genetically modified (GM) and conventional crops on biodiversity were presented in London in mid-October.

The trial was launched in 1999 to address fears expressed by English Nature, one of the government's wildlife advisers, that the powerful weedkillers applied to GM crops might hasten the decline in farmland wildlife that began with the birth of modern farming 50 years ago. It investigated whether three flagship weedkiller-resistant GM crops—oilseed rape, sugar beet and maize—were better or worse for wildlife than their conventionally bred counterparts. Two of the crops—the rape and the beet—flopped miserably (see *Philosophical Transactions of the Royal Society B*, vol. 358, p. 1775).

The trial showed that the crucial factors for wildlife are the type of herbicide farmers apply and when they apply it, rather than whether the crop is GM or not. The results were remarkably consistent, no matter where in the UK the crops were grown or which year, said Les Firbank, who coordinated the trial from the Centre for Ecology and



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Hydrology in Merlewood, Cumbria.

The big story is the massive differences between the impacts that the three crops—conventional or GM—had on wildlife. In many cases, these differences dwarfed those between a GM crop and its conventional variety. For instance, researchers collected an average of 1,707 beetles over a year in conventional beet fields, marginally ahead of the 1,576 found in GM beet fields. Yet this is more than double the number of beetles found in GM or conventional maize, and 50 to 60 per cent more than the number found in rape. Maize, whose GM variety was better for wildlife than its conventional counterpart, turned out to be worst for wildlife overall on many counts. (Source: *New Scientist*, 25 October 2003)

ARNIE ANOINTED BY THE ELITE?

Consider this Reuters news item from over a year ago...

The world's second-richest man dropped into the English countryside with the Terminator at his side on Monday, a day after warning the UK's corporate big game his elephant gun was loaded.

Billionaire Warren Buffett and mean-machine Arnold Schwarzenegger touched down by helicopter on the immaculate lawns of Waddesdon Manor, a Renaissance-style chateau in the undulating hills of Buckinghamshire.

Buffett, 72, is guest of honour at a closed two-day meeting of some of the world's most powerful businessmen and financiers—the ultimate networking opportunity. The get-together in the ancestral home of the Rothschild banking family will discuss economic and political issues, the organisers said...

Among those invited to Waddesdon Manor were the likes of James Wolfensohn, president of the World Bank, Jorma Ollila, chief executive of Nokia, and De Beers chairman Nicky Oppenheimer.

(Source: *Reuters*, 24 September 2002)

VEDIC MATHS CORRECTIONS

In the article on Vedic Mathematics published in *Science News* last issue, there was an error in the material provided to us by the author.

On the final page, the example given for 39 x 11 is incorrect. It should read:

$$\begin{array}{r} 39 \times 11 = 3 \quad (3+9) \quad 9 \\ = 3 \quad 12 \quad 9 \\ = 4 \quad 2 \quad 9 \end{array}$$

This makes the final answer 429, not 329. Our apologies for any confusion. Ed.

CHALLENGE TO EU BAN ON VITAMIN & MINERAL SUPPLEMENTS

The London-based Alliance of Natural Health (ANH) is set to mount a legal challenge to the contentious EU Food Supplements Directive (FSD). The FSD was passed into European law in July 2002 and effectively put a ban on 300 nutrients included in 5,000 health products, most of which are in dietary supplements closest to food forms.

In July 2003, the British House of Commons Standing Committee for FSD Regulations met and voted the FSD into English, Scottish and Welsh law. Dr Robert Verkerk, Executive Director of the ANH, hopes a successful challenge will result in the FSD being overturned by all EU states.

The ANH represents the interests of a number of organisations as well as independent manufacturers, suppliers and distributors of vitamins and minerals. Together they suggest the existing Directive be replaced with a revised FSD that allows for high-quality supplements across the whole of Europe. This would effectively harmonise good standards, not bad ones.

Three other Directives concerning Herbal Medicine, Novel Foods and EU Medicines are under consideration, but have not yet been ratified into UK law. The appropriation of traditional products is likely to increase, with food supplements, food substances and food beverages (health drinks and fruit juices) that are suppressed by EU Directives being repackaged as "Nutraceuticals" and sold by pharmaceutical companies.

Two Labour MPs have voiced concerns about the way the Regulations were voted through by the Standing Committee. Kate Hoey, MP, revealed what happened: "I was a member of this committee until I said, very honestly, that I would vote against the regulations." She was, together with five other MPs, "unceremoniously removed" from the committee the night before the vote and replaced with MPs who would vote in favour of the FSD. According to Kate Hoey, this gives a clear message that the government cares more for the pharmaceutical industry than it does about ordinary people. Her views are shared by Jeremy Corbyn, MP, who said: "The FSD is a product of ruthless lobbying tactics by the pharmaceutical industry which is not keen on the diversity of supply of vitamin supplements available in health food shops." He backs the ANH move.

Legal challenges have seldom been made to the 40,000 EU Directives implemented since the UK joined the Common Market in 1972, ostensibly to share in the Common Agricultural Policy (CAP). But Conservative MP Daniel Hannan complained to the *Daily Telegraph* on 3 September that "whenever you see an apparently insane Brussels Directive, someone, somewhere, stands to gain". And in his view, the Directives affecting natural remedies were the result of lobbying by the large pharmaceutical companies. MEP Nigel Farage said that, on one occasion, MEPs were required to vote on Directives 450 times in one 80-minute session. He freely admitted that it was a farce, and he voted as he was told.

Simply to question the validity of food supplementation is no longer enough when it is generally acknowledged that modern food production methods and deterioration of soil due to intensive farming are affecting vitamin and mineral content in food. For example, levels of the mineral selenium (Se) declined 50% between 1974 and 1991, and in the UK population selenium levels are lower than in many other European countries. Fourteen forms of selenium, including the organic forms, selenium yeast and selenomethionine, are forbidden on The Positive List, a list of permissible nutrients designated by the EU Commission. Specialist vitamin manufacturers have expressed concern that their products containing organic ingredients, excluded from the List, are being compromised by synthetic or inorganic equivalents that are on the List. All attempts to include a number of organic vitamins and minerals have been refused. Not only that, but to register their high-quality products for sale could cost up to £250,000 per nutrient plus evidence of their safety. All nutrients must be paid for and registered by August 2005, putting small, medium and large suppliers of food supplements under intense pressure.

In essence, the FSD is another blow to the individual's freedom to choose how to look after their health, be it in conjunction with a good diet or simply as a preventive against developing a chronic disease. Increasing visits to GPs to obtain the correct supplements, as the Directive would have us do, will not suit the overburdened Health Service at all, but it might just serve the big corporations.

(Sources: *The Institute of Science in Society*, 16 October 2003, <http://www.i-sis.org.uk/vitamins2.php>; *Alliance of Natural Health*, <http://www.alliance-natural-health.org>)